

# WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

## Weekly Spotlight

### Heat and Health



Exposure to excessive heat has wide ranging physiological impacts for all humans, often amplifying existing conditions and resulting in premature death and disability. The negative health impacts of heat are predictable and largely preventable with specific public health actions. WHO has issued public health

guidance for the general public and medical professionals on coping with extreme heat.

### How does heat impact health?

Heat gain in the human body can be caused by a combination of external heat from the environment and internal body heat generated from metabolic processes. Rapid rises in heat gain due to exposure to hotter than average conditions compromises the body's ability to regulate temperature and can result in a cascade of illnesses, including heat cramps, heat exhaustion, heatstroke, and hyperthermia.

Deaths and hospitalizations from heat can occur extremely rapidly (same day), or have a lagged effect (several days later) and result in accelerating death or illness in the already frail, particularly observed in the first days of heatwaves. Even small differences from seasonal average temperatures are associated with increased illness and death. Temperature extremes can also worsen chronic conditions, including cardiovascular, respiratory, and cerebrovascular disease and diabetes-related conditions.

Heat also has important indirect health effects. Heat conditions can alter human behavior, the transmission of diseases, health service delivery, air quality, and critical social infrastructure such as energy, transport, and water. The scale and nature of the health impacts of heat depend on the timing, intensity and duration of a temperature event, the level of acclimatization, and the adaptability of the local population, infrastructure and institutions to the prevailing climate. The precise threshold at which temperature represents a hazardous condition varies by region, other factors such as humidity and wind, local levels of human acclimatization and preparedness for heat conditions.

<https://www.who.int/news-room/fact-sheets/detail/climate-change-heat-and-health>

## EPI WEEK 26



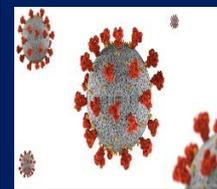
- Syndromic Surveillance
- Accidents
- Violence

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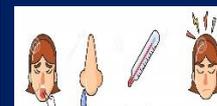
Class 1 Notifiable Events

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COVID-19

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Sentinel Surveillance in Jamaica



A syndromic surveillance system is good for early detection of and response to public health events.

Sentinel surveillance occurs when selected health facilities (sentinel sites) form a network that reports on certain health conditions on a regular basis, for example, weekly. Reporting is mandatory whether or not there are cases to report.

Jamaica's sentinel surveillance system concentrates on visits to sentinel sites for health events and syndromes of national importance which are reported weekly (see pages 2 -4). There are seventy-eight (78) reporting sentinel sites (hospitals and health centres) across Jamaica.

Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks - 23 to 26 of 2023

Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.

**KEY:**  
**Yellow** - late submission on Tuesday  
**Red** - late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
	2023												
23	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
24	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
25	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
26	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time

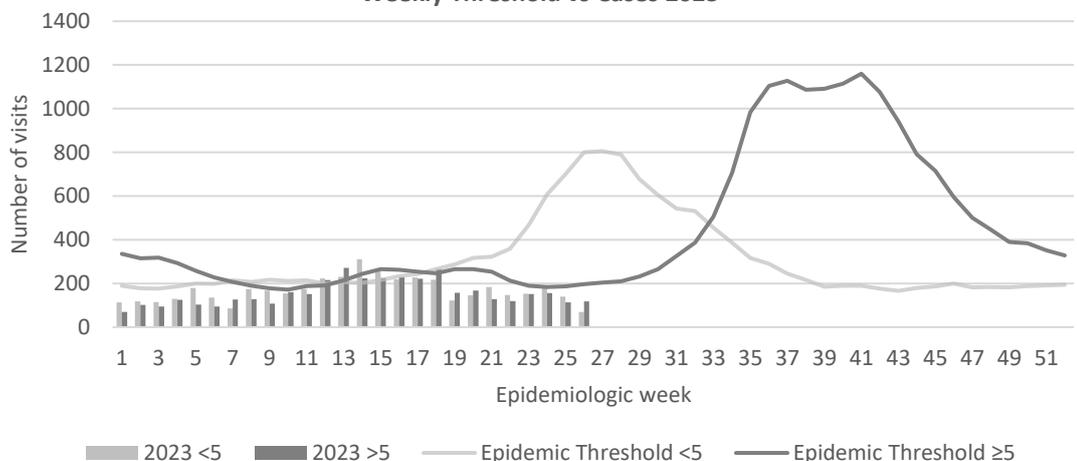
REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) with or without an obvious diagnosis or focus of infection.



Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2023



2 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



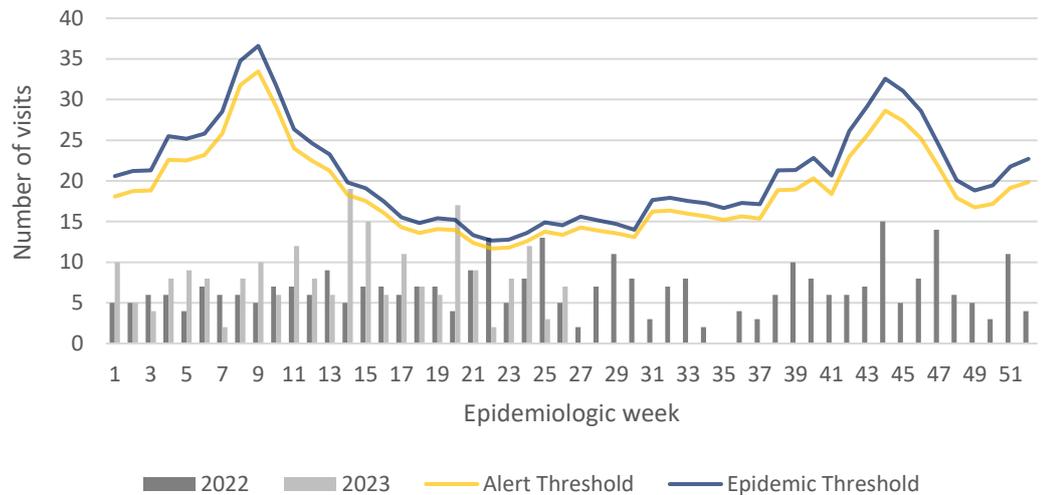
SENTINEL REPORT- 78 sites. Automatic reporting

**FEVER AND NEUROLOGICAL**

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) in a previously healthy person with or without headache and vomiting. The person must also have meningeal irritation, convulsions, altered consciousness, altered sensory manifestations or paralysis (except AFP).



**Weekly Visits to Sentinel Sites for Fever and Neurological Symptoms 2022 and 2023 vs. Weekly Threshold: Jamaica**

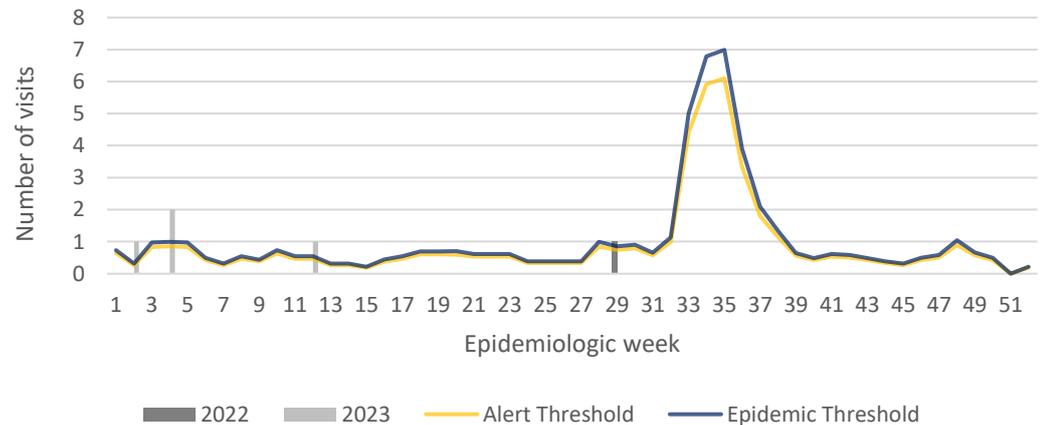


**FEVER AND HAEMORRHAGIC**

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



**Weekly visits to Sentinel Sites for Fever and Haemorrhagic 2022 and 2023 vs Weekly Threshold; Jamaica**



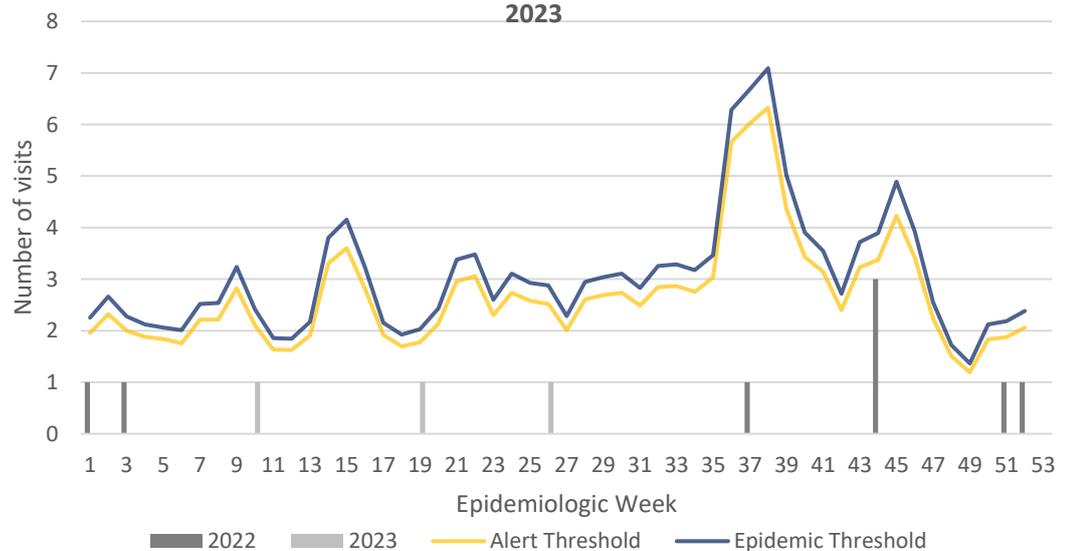
**FEVER AND JAUNDICE**

Temperature of  $>38^{\circ}\text{C}$  /  $100.4^{\circ}\text{F}$  (or recent history of fever) in a previously healthy person presenting with jaundice.

The epidemic threshold is used to confirm the emergence of an epidemic in order to implement control measures. It is calculated using the mean reported cases per week plus 2 standard deviations.



**Fever and Jaundice cases: Jamaica, Weekly Threshold vs Cases 2022 and 2023**



**3 NOTIFICATIONS-**  
All clinical sites



**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events



**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued



**SENTINEL REPORT-** 78 sites. Automatic reporting

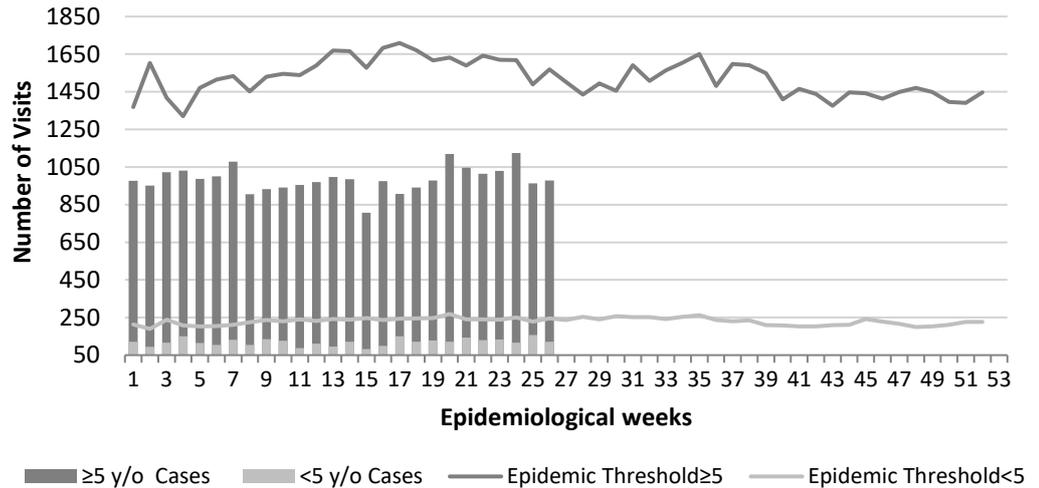


**ACCIDENTS**

Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.



**Weekly visits to Sentinel Sites for Accidents by Age Group 2023 vs Weekly Threshold; Jamaica**

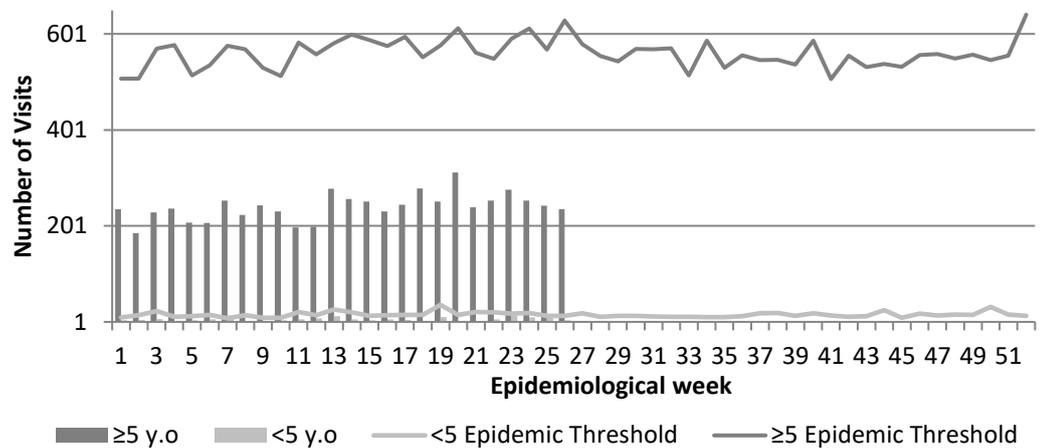


**VIOLENCE**

Any injury for which the cause is intentional, e.g. gunshot wounds, stab wounds, etc.



**Weekly visits to Sentinel Sites for Violence by Age Group 2023 vs Weekly Threshold; Jamaica**

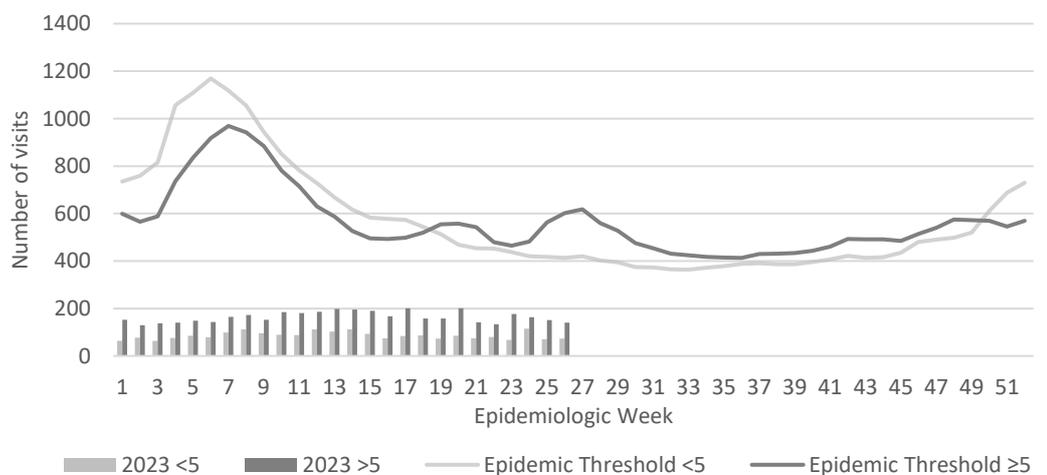


**GASTROENTERITIS**

Inflammation of the stomach and intestines, typically resulting from bacterial toxins or viral infection and causing vomiting and diarrhoea.



**Weekly visits to Sentinel Sites for Gastroenteritis All ages 2023 vs Weekly Threshold; Jamaica**



4 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



SENTINEL REPORT- 78 sites. Automatic reporting



CLASS ONE NOTIFIABLE EVENTS				Comments	
	CLASS 1 EVENTS	Confirmed YTD <sup>α</sup>			
		CURRENT YEAR 2023	PREVIOUS YEAR 2022		
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning	174 <sup>β</sup>	120 <sup>β</sup>	AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually.  Pertussis-like syndrome and Tetanus are clinically confirmed classifications.  <sup>γ</sup> Dengue Hemorrhagic Fever data include Dengue related deaths;  <sup>δ</sup> Figures include all deaths associated with pregnancy reported for the period.	
	Cholera	0	0		
	Dengue Hemorrhagic Fever <sup>γ</sup>	See Dengue page below	See Dengue page below		
	COVID-19 (SARS-CoV-2)	2500	46388		
	Hansen’s Disease (Leprosy)	0	0		
	Hepatitis B	22	8		
	Hepatitis C	10	2		
	HIV/AIDS	N/A	N/A		
	Malaria (Imported)	1	0		
	Meningitis (Clinically confirmed)	14	13		
	Monkeypox	3	N/A		
EXOTIC/ UNUSUAL	Plague	0	0	<sup>ε</sup> CHIKV IgM positive cases <sup>θ</sup> Zika PCR positive cases <sup>β</sup> Updates made to prior weeks in 2020.	
HIGH MORBIDITY/ MORTALITY	Meningococcal Meningitis	0	0		
	Neonatal Tetanus	0	0		
	Typhoid Fever	0	0		
	Meningitis H/Flu	0	0		
SPECIAL PROGRAMMES	AFP/Polio	0	0	<sup>α</sup> Figures are cumulative totals for all epidemiological weeks year to date.  NA- Not Available	
	Congenital Rubella Syndrome	0	0		
	Congenital Syphilis	0	0		
	Fever and Rash	Measles	0		0
		Rubella	0		0
	Maternal Deaths <sup>δ</sup>	26	40		
	Ophthalmia Neonatorum	70	48		
	Pertussis-like syndrome	0	0		
	Rheumatic Fever	0	0		
	Tetanus	0	2		
	Tuberculosis	19	13		
	Yellow Fever	0	0		
	Chikungunya <sup>ε</sup>	0	0		
Zika Virus <sup>θ</sup>	0	0			



**5 NOTIFICATIONS-**  
All clinical sites



**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events



**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued



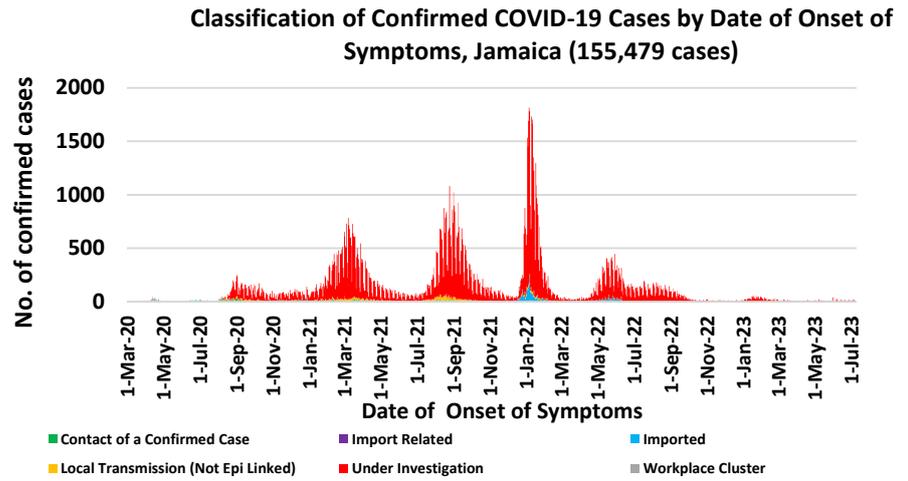
**SENTINEL REPORT-** 78 sites. Automatic reporting

# COVID-19 Surveillance Update

March 10, 2020 – EW 26, 2023

CASES	EW 26	Total
Confirmed	81	155479
Females	47	89643
Males	34	65833
Age Range	43 days old to 95 years	1 day to 108 years

\* 3 positive cases had no gender specification  
\* PCR or Antigen tests are used to confirm cases

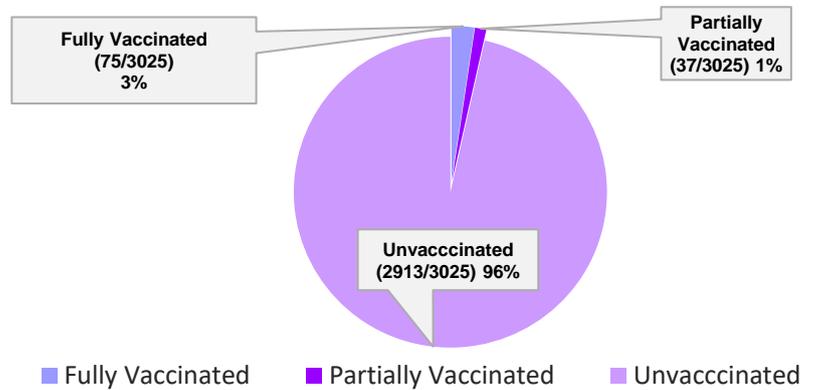


## COVID-19 Outcomes

Outcomes	EW 26	Total
ACTIVE *past 2 weeks*		148
DIED – COVID Related	0	3586
Died - NON COVID	1	311
Died - Under Investigation	0	315
Recovered and discharged	13	103032
Repatriated	0	93
Total		155479

\*Vaccination programme March 2021 – YTD  
\* Total as at current Epi week

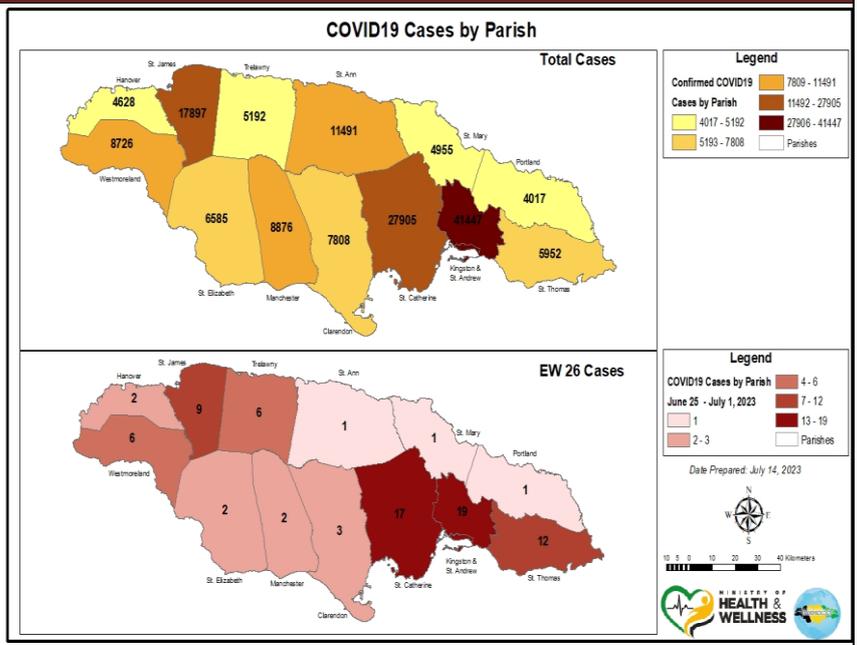
### 3025 COVID-19 Related Deaths since March 1, 2021 – YTD Vaccination Status among COVID-19 Deaths



## COVID-19 Parish Distribution and Global Statistics

### COVID-19 Virus Structure

**SARS-CoV-2**



### COVID-19 WHO Global Statistics EW23-EW26

Epi Week	Confirmed Cases	Deaths
23	168,897	1020
24	241,971	1625
25	193,328	829
26	190,386	1393
<b>Total (4weeks)</b>	<b>794,582</b>	<b>4,867</b>

<p><b>6 NOTIFICATIONS-</b> All clinical sites</p>	<p><b>INVESTIGATION REPORTS-</b> Detailed Follow up for all Class One Events</p>	<p><b>HOSPITAL ACTIVE SURVEILLANCE-</b> 30 sites. Actively pursued</p>	<p><b>SENTINEL REPORT-</b> 78 sites. Automatic reporting</p>
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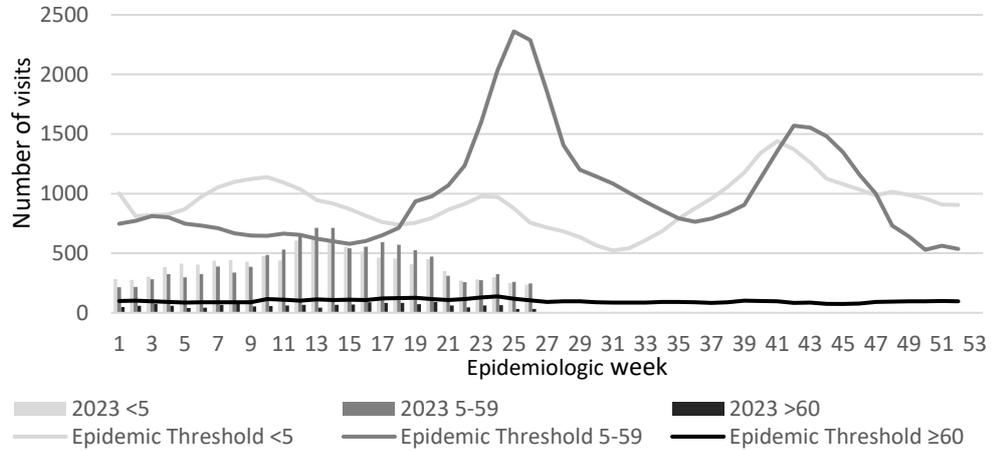
# NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

*EW 26*

June 25 – July 1, 2023 Epidemiological Week 26

	<i>EW 26</i>	<i>YTD</i>
SARI cases	11	399
Total Influenza positive Samples	0	127
<b>Influenza A</b>	<b>0</b>	<b>14</b>
H3N2	0	1
H1N1pdm09	0	12
Not subtyped	0	1
<b>Influenza B</b>	<b>0</b>	<b>113</b>
B lineage not determined	0	2
B Victoria	0	111
<b>Parainfluenza</b>	<b>0</b>	<b>1</b>
<b>Adenovirus</b>	<b>0</b>	<b>2</b>
<b>RSV</b>	<b>0</b>	<b>13</b>

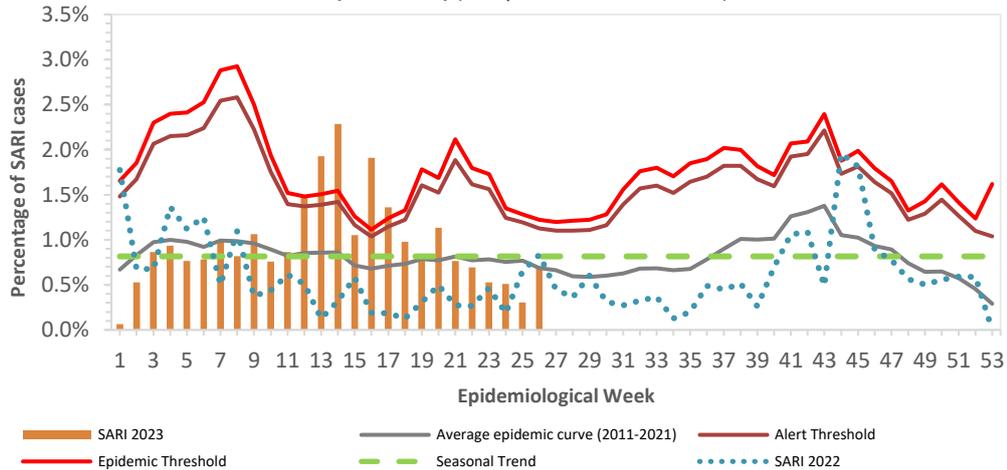
**Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2023 vs Weekly Threshold; Jamaica**



**Epi Week Summary**

During EW 26, eleven (11) SARI admissions were reported.

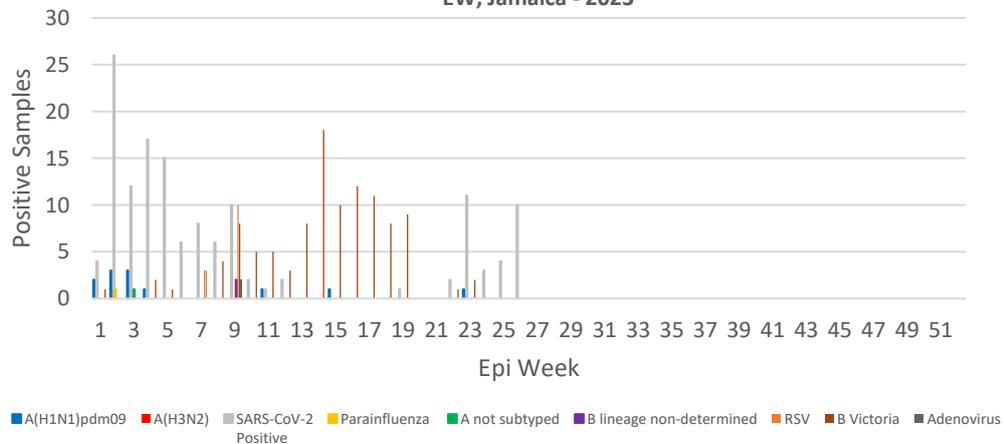
**Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)**



**Caribbean Update EW 26**

**Caribbean:** Influenza activity has shown a decreasing trend. During the last 4 EWs, the predominant influenza viruses have been B/Victoria, with lesser circulation of influenza A (mainly A(H1N1)pdm09). RSV activity has remained low. SARS-CoV-2 activity has increased in the last 4 weeks and is currently at intermediate levels of circulation. Cases of ILI and SARI have shown an increase due to positive SARS-CoV-2 cases and to a lesser extent influenza cases.

**Distribution of Influenza and Other Respiratory Viruses Under Surveillance by EW, Jamaica - 2023**



**7 NOTIFICATIONS-**  
All clinical sites



**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events



**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued

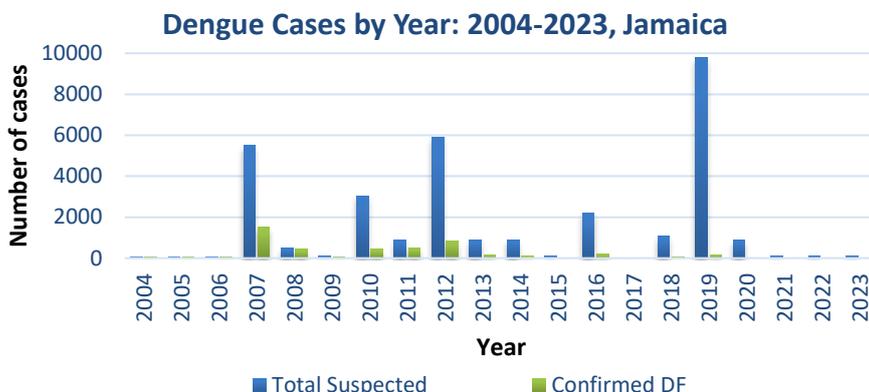


**SENTINEL REPORT-** 78 sites. Automatic reporting

# Dengue Bulletin

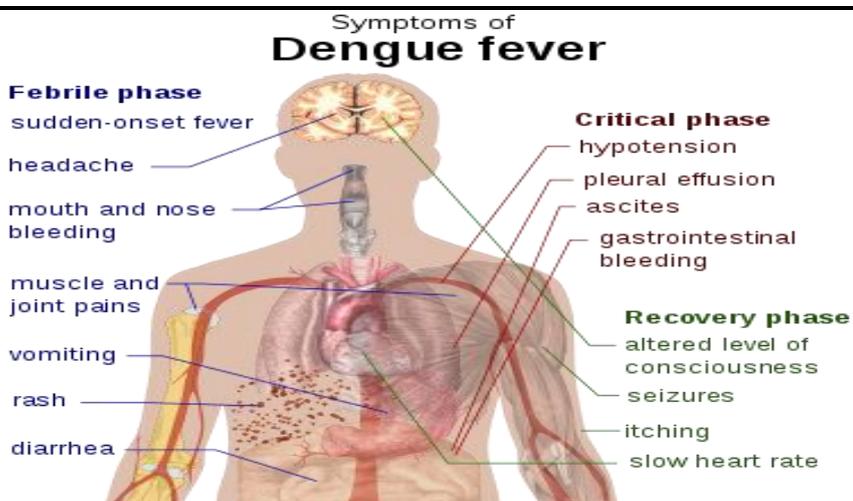
June 25 – July 1, 2023 Epidemiological Week 26

Epidemiological Week 26



## Reported suspected and confirmed dengue with symptom onset in week 26 of 2023

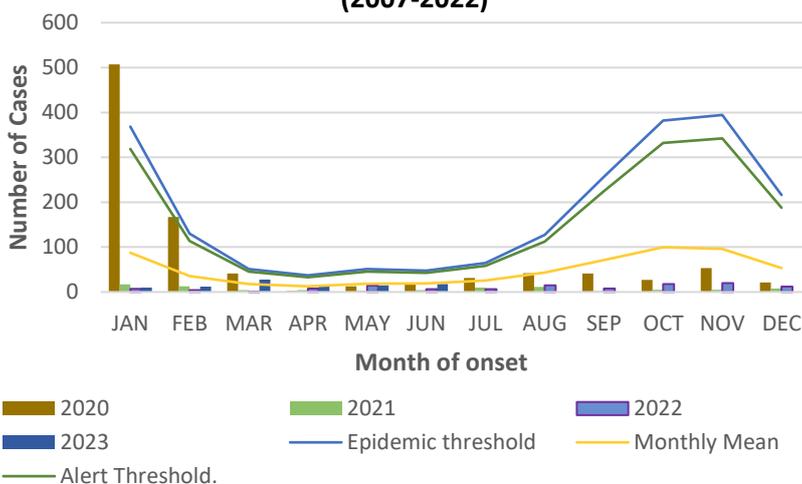
	2023*	
	EW 26	YTD
 Total Suspected Dengue Cases	5	112
Lab Confirmed Dengue cases	0	0
<b>CONFIRMED</b> Dengue Related Deaths	0	0



### Points to note:

- \*Figure as at July 1, 2023
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

### Suspected dengue cases for 2020, 2021, 2022 and 2023 versus monthly mean, alert, and epidemic thresholds (2007-2022)



8 NOTIFICATIONS- All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued



SENTINEL REPORT- 78 sites. Automatic reporting

# RESEARCH PAPER

## Abstract

### ***Entada gigas*: Underutilized Plant for Food and Nutrition from an Indigenous Community in Jamaica**

*Foster S R, Randle M M, Bozra D, Riley C K, Watson C T*  
*Scientific Research Council, Kingston, Jamaica*

**Background:** *Entada gigas* (cacao) is a leguminous plant used by the Accompong maroons from St. Elizabeth, Jamaica, for medicinal and nutritional purposes. The plant seeds contain high protein levels, but are underutilized due to the anti-nutrients present.

**Objectives:** The effects of three processing methods (soaking, cooking and autoclaving) on proximate composition, anti-nutritional compounds and mineral content of *E. gigas* seeds collected were investigated.

**Methods:** Qualitative and quantitative evaluations of active phytochemical constituents, proximate and mineral analyses were performed on differentially processed *E. gigas* seed extracts using standard assays.

**Results:** Nutritional composition of mature *E. gigas* seeds corresponds with most edible legumes containing per 100 g edible portion: carbohydrate 50-55 g, protein 21-26 g, fat 15-20 g, crude fibre 5.3 g, and moisture 4.4 -5.9 g. Essential minerals including calcium (84.87 mg/L), iron (3.24 mg/L), potassium (793 mg/L), magnesium (112 mg/L), manganese (0.94 mg/L), sodium (7.24 mg/L) and zinc (1.49 mg/L) were also detected. Flavonoids, glycosides, steroids, terpenoids, saponins, tannins and phenols were among the phytochemicals present. Anti-nutritional substances present in the raw seeds, were effectively diminished after soaking for 21 days without significantly affecting the nutritionally beneficial compounds.

**Conclusion:** *Entada gigas* has nutritive values, comparable to other plant protein sources. Hence, its utilization is encouraged provided that an appropriate processing method is used to reduce the anti-nutrient content.

*(Funded by Scientific Research Council)*



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9 NOTIFICATIONS-  
All clinical  
sites



INVESTIGATION  
REPORTS- Detailed Follow  
up for all Class One Events



HOSPITAL  
ACTIVE  
SURVEILLANCE-  
30 sites. Actively  
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SENTINEL  
REPORT- 78 sites.  
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